

Forecast^{FL}

Forward Looking analytics for improving today's decision making

Forecast^{FL} is the forward-look forecasting module in Investigator^{II}. Whichever way your organization forecasts demand: centrally in a planning department, collaboratively across teams, using manual returns, predicting from historic data or a mix of these, Forecast^{FL} provides tools to help perform this key business process consistently and feedback to help improve it over time. But For Forecast^{FL} does much more, its flexibility and ability to forecast on any facts, makes it an ideal tool for budget setting, performance tracking and monitoring of future trends in key performance indicators (KPI's)

Forecast any fact – predict KPI trends

All calculated facts are produced dynamically on-demand, not only basic data, but the measures used for your KPI's are always current. Although Forecast^{FL} has a host of facilities for forecasting demand, it also allows you to predict all these measures into the future and understand the possible effects on your business.

Collaboration

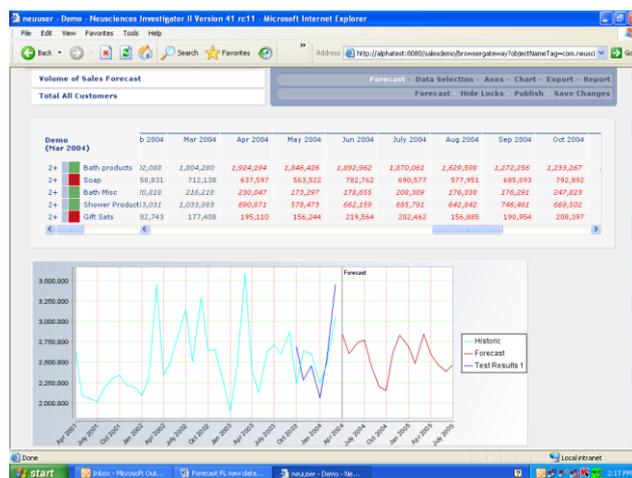
Separate departments, offices and individuals can all be called upon to contribute to forecasts. Forecast^{FL} lets managers work with people to consolidate forecasts while letting each contributor retain his own forecast for future reference as well as having the approved forecast to work with. Draft forecasts can be forwarded and reviewed before commitment.

Advanced Forecasting Methods

Forecast^{FL} has a range of regression, Fourier and neural-net models to perform forecasting. These are applied singly or in combination to let us identify trends, cyclic or seasonal factors and random variability. Most users will let the system choose the approach to use through using tournament methods. However, if you have a favourite approach you may prefer to use it exclusively. By keeping histories of past forecasts you can even allow your manual forecasts to compete in the tournaments. After all, the objective is to provide the forecast in which the business can have the most confidence.

Heirarchical Consistency

If you make forecasts at individual product or sales channel levels, these will be automatically consolidated up to the level you want. Alternatively, higher level forecasts will be automatically trickled down to the lowest levels according to pre-defined conditions. Even if forecasts are made at the top level in value terms, these can still be converted to volumes as well as value at all levels.



Manual entry and editing

Because you can forecast at any level on any fact, you can choose whether to use a manual or algorithmic forecast each time. Furthermore, if you choose an algorithmic approach you can still edit individual values. Again, you may choose to do a forecast at a higher level and edit some of the lower levels.

Fixing forecast lines

Another requirement in getting a suitable forecast may be the need to fix some values (say sales of a particular product at a particular outlet). You can do this while still doing a manual or automatic forecast at a higher level, the trickle-down adjusting for the fixed values.

Rule-based changes

It is common practice to provide forecasts using rules such as: 'increase last year's forecast by 10%' or 'make this new product forecast based on the sales of that old product' etc. Forecast^{FL} lets you incorporate rule-based forecasts where you want.

Tracking forecast performance

Once a forecast period has elapsed then it is possible to compare it with reality. By keeping past forecasts it is possible to judge their relative performance over time and use this to improve performance and certainty in future.

Budgets, Plans and Targets

Forecasts can be made for any period ahead and for multiple periods so it is possible to have long term views, annual or periodic budgets, sales target forecasts and shorter term plans for production loading and the ability to compare one with another and with actuals, periodic or cumulative.

What-if? Experiments

To help in budgeting and planning it is useful to explore options and observe the effects. Forecast^{FL} allows you to experiment in your own working space without affecting existing plans. Create as many versions as you need prior to committing to finished plans. And to help in target setting, different targets can be applied to different departments each with their own access permissions.

Campaigning

Forecast^{FL} allows forecasts to be built up from constituent parts. So any product line can be made up of a base level demand and campaign effects. Knowledge of campaign profiles and cross capture effects can be input to the campaign component and clearly identified in future analyses.

Ongoing Research and development

Forecasting by its nature can never be exact. However, new methods continue to be researched where we can improve both accuracy and confidence levels in forecasting. Neusciences has an on-going programme of research into Forecasting methods and plan to incorporate new techniques into Forecast^{FL} to meet ever more challenging needs. We can undertake evaluation of your requirements and with our knowledge of predictive modeling, implement solutions appropriate to you.



Investigator^{II} system architecture

Investigator^{II} is a web server application accessed via standard browsers, using HTTP, or SOAP. As well as manual input, data can come from file feeds, automatic feeds linked to ERP systems, transaction systems and other sources. Only base data is stored using SQL Server. All calculated facts are performed on request. This makes the system capable of real-time operating. The application comes with Analyser^{RT} as standard and additional capability, such as Forward Look forecasting and Market Watch for external market data come as options. Backing these up are administration facilities for configuration, security and management.

Capacity & performance

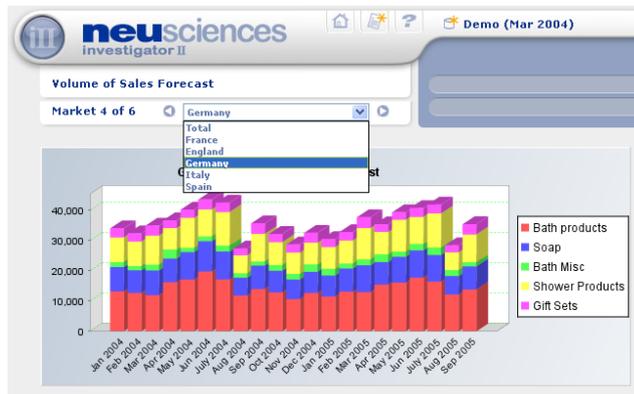
The application can accommodate an unlimited number of hierarchies or facts. Performance is dependent upon hardware configuration. This should be configured according to the number of users and extent of the data to be held.

Minimum Requirements

Web Server:
Pentium processor > 1.5GHz, 512Mb RAM, 40Gb disc, running SQL server, Apache Tomcat and Java VM1.5.

Note: database can be hosted on the web server or on a separate database server as required.

Client:
PC with Internet browser Explorer 6 or equivalent, internet or VPN network connection



Forecasting Algorithms

Forecast^{FL} contains the latest in time-series prediction algorithms to enable trends and cyclic effects to be identified. Included among the algorithms are:

- Regression methods
- Fourier analysis
- Neural-nets
- Combinatorial methods

The user can select to use a particular algorithm or allow tournaments to be run where the method giving the best results on most recent data is chosen.

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